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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/059,988	01/29/2002	Zhihao Yang	83965HEC	6122

7590 05/10/2004  
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EXAMINER

SITTON, JEHANNE SOUAYA

ART UNIT PAPER NUMBER

1634

DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/059,988

Applicant(s)

YANG ET AL.

Examiner

Jehanne Souaya Sitton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The examiner reviewing your application at the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to examiner Jehanne Sitton.

2. Currently, claims 1-14 are pending in the instant application. The rejection of claims 1-14 under 35 USC 103(a) made in the previous office action is withdrawn in view of the new grounds of rejection set forth herein. All the amendments and arguments have been thoroughly reviewed but are deemed insufficient to place this application in condition for allowance. The following rejections are newly applied and constitute the complete set being presently applied to the instant Application. This action is NON-FINAL.

#### ***New Grounds of Rejection***

#### ***Claim Rejections - 35 USC § 112***

3. Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a NEW MATTER Rejection.

In the amendment filed 6/20/2003, claims 1 and 8 were amended to add the limitation, "wherein the optically distinguishable material has a size of about 0.05  $\mu\text{m}$  or greater". A thorough review of the specification shows that the size of the optically distinguishable material can be a microparticle having a particular size from 0.001  $\mu\text{m}$  to 10  $\mu\text{m}$  or from about 0.05  $\mu\text{m}$  to about 1  $\mu\text{m}$ . The amendment to the claims, however, states that the size can be 'greater' than

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0.05  $\mu\text{m}$ , which included embodiments outside and larger than the ranges contemplated in the specification. Such amendment, therefor, introduces new matter into the claims. See MPEP 2163.05, section III which states:

With respect to changing numerical range limitations, the analysis must take into account which ranges one skilled in the art would consider inherently supported by the discussion in the original disclosure. In the decision in *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976), the ranges described in the original specification included a range of "25%- 60%" and specific examples of "36%" and "50%." A corresponding new claim limitation to "at least 35%" did not meet the description requirement because the phrase "at least" had no upper limit and caused the claim to read literally on embodiments outside the "25% to 60%" range, however a limitation to "between 35% and 60%" did meet the description requirement.

#### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Chan et al (hereinafter referred to as Chan; Pre Grant Publication 2003/0059822, 102(e) date: 9/18/2001; provisional application is provided).

Chan teaches a method for differentially tagging of sequence specific probes which allows the position of the probes to be determined with greater spatial resolution (see section 0007, page 1). Chan teaches a method for analyzing a polymer by labeling the polymer with first and second unit specific markers having different and distinct labels (see page 1, para 0008). Chan also teaches that the unit specific markers can be the same, but have distinct labels (see

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para 0009). Chan teaches that the unit specific marker can be a nucleic acid such as a probe (see page 8, para 0076), a peptide nucleic acid or a peptide or polypeptide (para 0009, page 2, para 0013) and that the polymer is preferably a nucleic acid that is genomic DNA (see page 2, para 0013). Chan teaches that the unit specific markers are conjugated to a label, including a enzyme, a biotin molecule, an avidin molecule, a semiconductor nanocrystal, a semiconductor nanoparticle, a colloid gold nanocrystal, a micro bead, a quantum dot, a protein, a peptide, a carbohydrate, an antigen, an antibody, etc (see page 2, col. 0015). Chan teaches that the first, second, and subsequent labels are independently selected (see page 2, para 0016, page 9, para 0092) from any of the labels taught by Chan (embodiment of "two or more different optically distinguishable..." in claims 1 and 8, and claims 3, 4, 10, 11). Chan teaches that the nucleic acid molecules are analyzed using linear polymer analysis systems (see page 3, para 0033, paras 5, para 0049-0053) such as DNA combing, and AFM (atomic force microscopy). Chan teaches that the labeled unit specific markers can be exposed to the station or energy source and the polymer as they are moving (page 12, para 0109). Chan teaches that the polymer can be aligned and stretched before it reaches the interaction station. See also claims 1-17 and 25-57 of Chan.

### ***Conclusion***

6. No claims are allowable over the cited prior art.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Jehanne Sitton whose telephone number is (571) 272-0752. The examiner can normally be reached Monday-Thursday from 8:00 AM to 5:00 PM and on alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jones, can be reached on (571) 272-0745. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature should be directed to the Group receptionist whose telephone number is (571) 272-0507.



Jehanne Sitton  
Primary Examiner  
Art Unit 1634

4/19/04